

ABSTRACT

A DC converter alternately turns on and off a main switch Q1 connected in series with a primary winding P1 of a transformer T and a sub-switch Q2 contained in a series circuit connected to each end of the primary winding P1 of the transformer T or to each end of the main switch Q1, rectifies and smoothes a voltage of a secondary winding S1 of the transformer T, and provides a DC output. The DC converter includes a time difference detection circuit 13 to detect an interval between when the main switch Q1 reaches a minimum voltage after the sub-switch Q2 is turned off and when the main switch Q1 is turned on and a first delay circuit 14 to delay the ON timing of the main switch Q1 according to an output from the time difference detection circuit 13 so that the main switch Q1 is turned on at around the minimum voltage.